



Speaker: Gerson Petronilho
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Thursday, July 8, 2010
1:00 pm
258 Hurley Hall

Title: Gevrey regularity of the periodic gKdV equation

Abstract:

Using the multilinear estimates, which were derived for proving well-posedness of the gKdV equation, we show that if the initial data belongs to Gevrey space G^σ , $\sigma \geq 1$, in the space variable then the solution to the corresponding Cauchy problem for gKdV belongs also to G^σ in the space variable. Moreover, the solution is not necessarily G^σ in the time variable. However, it belongs to $G^{3\sigma}$ near 0. When $\sigma = 1$ these are analytic regularity results for gKdV.